

# **A new paradigm forest development in Sambelia, East Lombok: A Clean Development Mechanism (CDM) approach**

## *Paradigma baru dalam pembangunan hutan di Sambelia Lombok Timur: Pendekatan CDM*

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### **Abstrak**

Tulisan ini menyajikan pendekatan baru dalam pembangunan kehutanan yang diujicoba di Sambelia Lombok Timur: Pendekatan CDM dengan penekanan pada kajian keberadaan proyek. Penentuan lokasi dilakukan secara sengaja (puspositive) yaitu desa Labuan Pandan, mewawancarai petani, pemerintah, LSM dan universitas masing masing 25, 2, 2 dan 3 responden. Dengan menggunakan quessioner yang disediakan CDM proyek, wawancara mendalam dilakukan dengan semi struktur langsung. Data sekunder dikumpulkan dari institusi yang relevan. Studi ini mengungkapkan bahwa pendekatan CDM menjanjikan banyak keunggulan: ekologi, ekonomi dan finansial. Kehadiran CDM kurang dikenal masyarakat dan karenanya perlu sosialisasi yang lebih intensif agar masyarakat dapat memberikan dukungan optimal. Peranan lembaga donor sangat menentukan keberhasilan pendekatan ini.

Kata kunci: hutan, CDM, Sambelia

### **Abstract**

*This paper presents the implementation of a new paradigm forest development in Sambelia, East Lombok: a CDM approach. The target village was selected on purpose, namely: Labuan Pandan Village. Respondents consist of 25 farmers, 2 local government representatives, 2 NGO representatives, 3 university representatives. Primary data were collected using questionnaire provided by CDM Project. In-depth interview was applied using semi structure direct question. Secondary data were collected from relevant institution such as East Lombok District Office, Sambelia Sub District Office, and from Statistic Office. This study recorded that the CDM approach promises many benefits: ecology, economy and financial. The presence of CDM is less well known by local people and therefore it needs to be socialized*

*more intensively to enhance the support and stake holders participation. The role of funding countries plays the key determinant factor for the approach.*

*Key words: forest, CDM, Sambelia*

## **Introduction**

Forest in NTB dominates the land in the province, the large of about 1,068,977 ha (53.04%) (Hartina and Tejowulan, 2006). Similar to other province, the forest in NTB is in the terrible degradation condition brought by illegal logging, land occupation and burning. This condition has a long severe impact environmentally. Lost and disappear of water sources, global warming, the extinguish of biodiversity, the increase of carbon dioxide level, are the examples of bad impacts of degraded environment. This unexpected condition is experienced by about 4,200,000 people life in that province, spread into two islands: Lombok and Sumbawa Islands. In the year of 2005, the Human Development Index (HDI) of this province is the lowest in Indonesia (ranked number 30 of 30 provinces) (The UNDP, 2006). Annual income of this province is Rp 1,100,000 (equal to US\$130) per capita in average, education is very low (most of the people are elementary school graduation), and the levels of health is the lowest including the life expectation rate of the people. As income is so low, and at the same time the cost of living is getting increase, leads people to work harder including finding any opportunity to generate income such as going into forest to harvest the products. The high pressure of need causes people neglect the right and wise way to explore the resources. Some people run illegal logging, illegal grazing and illegal land occupation which destroy the resources. Awaiting this harmful trend, the NTB government sets some programs. In the period of 2003-2007, the government targets to rehabilitate the degraded land of 75,000 hectares in 5 years (Baderun, 2006). However, the result is still far from expectation. The power to destroy is stronger than that to restore.

The presence of foreign aids can be a significant encouragement in running the development. Cleaning Development Mechanism (CDM) is a sustainable development program funded internationally. This approach is being tried in Lombok, and therefore this approach is considered as a new approach for the people. Refer to Rio de Janeiro Declaration (Earth Summit) and Kyoto Protocol, the program of CDM is open for any eligible countries over the world. About 300 hectares degraded forest at Kurbian Labuan Pandan Sambelia is considered as a very match land for CDM. Since the end of year 2005, the CDM project has commenced to plant the trees in that site. For the local people, CDM approach is a new paradigm forest development. This term is still strange and only certain part who involve in the project know about it. The main idea of CDM is how to grow trees for catch excess carbon dioxide released by human respiration, industries and domestic activities. CDM required certain condition of land: the land has been afforestation for 20

years or more, need a high technology to rehabilitate the land, people can not do themselves greenage the land. This paper provides some features about the CDM project in Kurubian Sambelia east Lombok. First is presenting the discription of project empirically to show the general picture about the approach, than comment and discuss on it implementation to get the comment impression about the approach finally concluding base on the discussion.

## Methodology

The target village is selected on purpose that is Labuan Pandan Village under consideration that CDM project site is located in this village and therefore the village has been strongly effected by plantation project. Respondents in this study consists of farmers and other stake holders such as local government, NGO's people, and university people. To be comprehensive, the respondents of farmers include those who involve in project and not involve in project. The total of farmer selected as respondents is quoted to 25 persons, 16 persons are those who involve in project and the rest of 9 persons are not involve in the project. The respondents come from 4 sub-villages located in Labuan Pandan Village. The arrangement of selecting farmers respondents is presented in Table 1.

**Table 1. Number, Village and Lot of Selected Farmers Respondents**

No	Sub village	Lot	Number of involved farmers	Number of farmer sample		
				Involve in project	Not involve in project	Total
1	Aik Manis, Kpg Lepper	1	11	4	3	7
2	Padak Guar	2	11	4	2	6
3	Kurubian I	3	11	4	2	6
4	Kurubian II	4	11	4	2	6
	Total	4	44	16	9	25

So far, the project has grown about 40 hectares land from the target of 150 hectares for three years time. The 40 hectares was divided into 4 lots of 10 hectares. The number of farmers (as laborers) for each lot is 11 persons including the field coordinator. So, the total of the involved farmers is 44 persons From this number, 16 involved farmers were selected by using Simple Random Sampling.

The respondents of not involved farmers were selected from the consecutive sub-villages. The total of not involved farmers is 9 persons, and they are selected accidentally in each sub village.

The respondents of other stake holders are quoted to 7 persons consists of 2 persons are the local government (the head of Labuan Pandan

village and the Field Forestry Worker), 3 persons from University and 2 persons from NGO

Data in this study consists of primary and secondary data. Primary data were collected by interviewing the total of 32 respondents (25 farmers, 7 stake holders) using questionnaire provided by revised CDM Project. The dialogue was run by using semi structure direct question. A leader directs the topic keep staying in the issue needed. The floor participated by expressing their willingness and objection without directing much by third part. In the case of very poor farmers in the sense of communication, the leader help the farmer by raising the alternative of possible answers, kind of close question for that kind of farmer. One person (administrator) keeps taking note along the dialogue and some times help the forum by reminding the on progress discussion, if needed.

Secondary data were collected from relevant institution such as East Lombok District Office, Sambelia Sub District Office, and from Statistic Office.

## **Result and analysis**

### **Physical feature**

The plantation area is located in Kurubian Sub Village. The far from main hot mixed road is about 2,5 kms which is still earth-stone solid road. The location is divided into 3 blocks: I, II, III, with the area of about 40, 55, 55 ha respectively. The project works on the Block I for this year 1 (2005/2006) which is divided into 4 lots to ease the management of planting.

The commencement of planting in the Lombok CDM project is in January 2006, the land preparation and clean started at two months before planting (November December 2005). This time is considered as a right time for planting as the rain still comes until Marc – April 2006. The Lombok CDM project is located in Dusun Kurbian, Desa Labuan Pandan, Sambelia Sub District, East Lombok. The target area is 150 ha for three years (2005, 2006, 2007). The large of 40 ha has been planted in first year (2005), the other 55 and 55 ha will be planted in the year two (2006) and year three (2007) respectively.

Vegetation before project starting is grass and bushes with small trees scattered. In dry seasons, the vegetation turn dry and it is very easy to cause a fire. Before project starting, the land is left unused, but only illegal fuel wood productions by local people, and for certain place is used as a resource of grass for animal food. The increasing number of the farmers who raising animals leads to the increase of grass need. People from other sub district like from Masbagik, Aikmail come to that place hiring truck to carry the grass. So far the grass is not marketable; those who need the grass simply come and collect it without paying.

After three months planted, it is evaluated that the percentage of life planted trees is high that is about 75%. In average, the population of trees per hectare is 800 trees, about 600 trees is alive. The distance between trees in one raw takes 2.5 meters, and between raw takes 5 meters with the hole

size is 40 x 40 x 40 cm in length, wide and depth respectively. The pattern used in this project is by repeating 5 raw patterns consist of 5 kinds of trees: jati putih (*Gmelina*), imba (*Azadirachta indica*), sengon (*Parasirientes falcatoria*, sp), trembesi, and jambu mete (cashew fruit, *Anacardium occidentale*, sp). Four kinds of trees are for forest trees and one kind is for fruit tree that is cashew fruit. The composition is 75% forest trees and 25% (Multi Purpose Tree System (MPTS)).

In the past (more than two decades ago), the site used to be a heavy jungle. Immigrants with heterogeneous background came and settled there. There is no typical feature of the site in term of religious or traditional sacred site.

## Location

Labuan Pandan Village consists of 5 sub villages, occupied by 6, 896 people (2,300 families) and about 49% is male (The Monograph of Labuan Pandan Village, 2006) From 25 farmer respondents, it is identified that the family size range between 1 to 15 people with the average of 5 people per family. The number of girl is more than boy with the girl-boy ratio is 1,32. Mortality rate is also high, from 112 children born, some of 22 children are die, and two died children per family in average. There are 4 families (out of 25 respondents) practicing polygamy in the sense that they marry more than once.

The high load of family without balancing by enough income, causing local people remains poor. NTB province is the poorest people nationally. Annual income of local people lay far below the NTB Province Minimum Wage. It ranges between Rp 960,000 to Rp 1,440,000 with the average of Rp1, 212,000 per year while the Province Minimum Wage is Rp 400,000 per month or Rp 4,800,000 per year.

With the very low level of education (the majority of elementary school), which also associated with skills, it is understandable if most of them are low productive people. Besides low skill, low purchase power contributes significantly to labor wage. This in turn will determine the level of income, the very basic cause of many fails in running social project. Issue of poverty in this place is complex, kind of satanic circle: low education leads to low skill, low skill leads to low productivity, low productivity leads to low investment, low investment leads to low education, etc. Usman (2003) identified that at least, there are 4 factors causes them poor; miss money management, low productivity, high loading family, and marriage-divorce. These causes can stand alone or combination of two or more.

Labuan Pandan is a multicultural village, occupied dominantly by Sasak ethnic (65%). The other ethnics are: Bugis, Java, Bali, Bima and Sumbawa. The majority (80%) of land in this village is forest, and the rest is dry and sleeping lands. The land there is categorized as low quality soil, heavy soil that is hard to use for crops. The only known water spring is located in Bokor, about five kilometers from the village, take about two hours on foot. The capacity of the water spring 600 mls per 11 seconds or 54 mls

per second measured in dry season. In the dry season, which is peaked on July, August, September, the location is very sensitive of fire. Fire is the very common nature disaster happened at the village.

### **Local economical activities**

The majority of Sambelia people work in agricultural sector. In the year of 2004, the number of agricultural labourer is 9,659 people, land owner 1,646 people and livestock 1,105 people. In non-agricultural sector, people working as trader is rank 1 (42.87%) followed by transport (31.55%) and the other activities, which range of 2.32% - 10.96%

Data collected shows that some 20% of respondent do not have own land. This group run farming on other people land with rent land or share yield. There are 44% respondents who own land also tillage other people land. Those who diligently work on land can manage more, contradict to those who are less diligent. It is also found that the land under their authorisation (own or rent) is used less intensive in the meaning that some area of the land is left unplanted. The majority (56%) respondents grow crop on their land, some 48% grow fruit trees dominantly cashew fruit and only very few respondents want to grow forest tree on their land. Asking further for their reason, the main consideration is cash, short term income. They grow crop for meeting the daily need. They perceive that growing forest tree is uncertain in the sense of harvesting product. Because take longer time for tree for growing up until reach the marketable size, there is no guarantee that they will have chance to harvest the trees. Some unexpected cases discourage them to grow trees. Grown trees planted by certain people are harvested by other people, unfair. Beside time factor and uncertainty, farmers respondents also consider 1) price, 2) soil compatibility, 3) seed availability, 4) cost rate, 5) environmental reason, 6) easyness (familiarity) in choosing the plants. Reason 2 (soil compatibility) stand at number 1 followed by reason 1 and others.

Respondents assess that crop is not the main resource of income. More money they earn from hiring labour, contribute about 62%. This is true, specifically in the era of project when many people got chance to hire their labourer. Their annual income ranges from Rp. 960,000 to Rp. 1,440,000 with the with the average of Rp. 1,212,000.

### **Perception of respondents toward the project**

All respondents but one expressed that the presence of CDM project does not loose them. On the other hand, they get benefit from the project. In short run, they get chance to hire their labor for the project from land preparation, digging hole, planting and maintaining until enough age and height for the trees to have a self restrain especially from a drought. The reasons of joining CDM project are for earning wage (80%) as they are involved as daily hired laborers, for getting land for growing crop (15%) and for getting fuel wood (5%) (Appendix 10). It seems contradictive, only 5% respondent confess that their involvement in CDM project is for fuel wood,

mean while they claim that all of them (100%) use fuel wood for cooking. Apparently, they meant that they do not collect fuel wood much from the CDM site, but most of the fuel wood are from exist forest, garden and home yard, not from CDM project site. However, it is very possible in the future after trees grown up the CDM project is one potential target area for people to collect fuel wood. Unless there is an alternative resource of fuel wood so the people do not need to disturb the CDM project.

Actually, local people want to participate in the project not only as hired laborers but also want to use the land for growing crop for certain period until the forest trees grown up. Some 76% respondents show their willingness to use the land for crop. All respondents but one does not agree to involve people out of the village to participate in project especially as employees. They expect the project very much to put a main priority to the local people to be involved in those activities.

Asking forest maintenance, some 68% respondents agree that local people should take care for the forest, 28% respondents said that the forest should maintained by government together with the local people, and the rest of 4% respondents said that industries should take responsibility for the forest. The majority of respondents (88%) are ready to play their function of social control by hindering and aborting any body that want to destroy the forest.

The perceptions of respondent toward the forest worthy in their life are various. According to their answers, there are three benefits respondents elicit from forest namely: 1) for income generating, 2) for water spring, 3) and for erosion prevention. Some 28% respondents gave a single answer (answer 1 or 3, none for answer 2), 48% gave multiple answers (the combination of answers 1 - 2, 1 - 2 - 3, 1 - 3, and 2 - 3). It is also identified that 24% respondents can not perceive the worthy of forest and saying none they got from forest. The latter respondents do not concern much to the development of forest.

The other issue collected from respondents is regulation and institution. Local traditional regulation is exist informally, means that the regulation is not in the form of written document. They confess the effectiveness of the traditional regulation as a reference norm of the people. To those who break the regulation will burden a sanction which is negotiable and in family context. If they fail to agree the kind of sanction, the laggard person can escape from the sanction, but people will social-psychologically exile the laggard disrespectfully.

According to local people thought, to keep trees remain life is by watering them in dry season particularly for the first three years of planting. They explained that the cause of failure so far is because the planted trees were not watered in dry season, and then replant again next coming year which face the same fate (die again in dry season). That occurred repeatedly year-to-year.

## **The benefits**

The presence of this project benefits local people in the sense of ecology including fresh clean air, water spring, erosion void, biodiversity. Drier climate, flood, erosion etc have reached the serious and intolerable condition. In economic sense local people get many benefits: in short, middle and long term; local national and international. In short term, local people earn money (wage) as the project empower local people as labourers. All laborers gratify to the project as the project saves their lives. They earn Rp 20.000,- per day. Although the wage rate is lower than NTB province minimum wage that is Rp 700,000 per month or Rp 29.161 per day, but because of no option to earn money, they forcefully accept the low pay job., Some local companies also get jobs: installing water pipes, developing forest roads, provide seed, seedling or small trees., Transportation company and small local kiosks also get benefits , In midle term, local people can utilize the land for crops until the trees grow high, the canopies cover the land in most, so the farmer (local people) could not used the land any more. This benefit will be really effective as far as project guide and empower the local people in growing the crop. Otherwise, they will suffer lost as the crops can not grow., Besides crops, local people can also take fuel wood from the dried branches. By developing appropriate mechanism, it can be convinced that the trees are in safe though local people are allowed to collect dried branches., Besides fuel wood, local people can also collect green grass for their animals., Sesbania ca be also very potential trees as sourse of animal voliage even for people vegetable. The leave and flower of sabania has a high calory and mother eats the leaves for breast milk., In long run, local people can harvest the fruits without harming the forest trees. Again, with appropriate mechanism, the trees can be kept in good maintaining. , Local dan internasional, Local and regional development. Agriculture developments has a high multiplier effects both forward and backward linkages., Create link and partership between target countries (indonesia) and sponsores (concorcium countries), leads to Better understanding in win win collaboration, Reduce Global warming, Tackling skin cancer and other disease as impact of te thickness of ozon layer.

## **Financial counting**

The very direct benefit is employment. It is employed 667 man days per ha for the first year. It means this project absorbs about 100.000 man days in a year, very significant figure for the local people. The wage rate Rp 20.000 per day leads to the earning of Rp 2 trilyun per year. This is not including labourer for management and construction. The calculation is as follows. Distance between trees: 3x5m, effective area 80%, population per hectare (trees) 533, Cost per tree (Rp) 25,000, cost per hectare (Rp) 13,333,333, labour wage (Rp/day) 20,000, so equivalent labourer (man days) 667,



Fuel woods from dried branches. Using the use of carosine is about 1 botol per day with the price Rp 2.000,- per botol (the very pesimist fugure), this project can safe Rp 1,656 triliyun per year just for Labuan Pandan Villagers. We assume, the dried bunches are just enough for the villagers. The calculation is as follows: Carosine use 1 botol/day/family, Price Rp 2,000/botol, Cost per month/family Rp 60,000, Cost per year/family Rp 720,000, Total family in Labuan Pandan Village 2,300 people, Cost/year for the villagers Rp 1,656,000,000,

Grass and sasbania for animals folirages contribute Rp 81 million in a year. The calculation is as follows: farmer spend for one animal (horse, caw) (Rp/day) 5,000, animal population in the village 45, spend per day (Rp) 225,000, spend per month (Rp) 6,750,000, spend per year (Rp) 81,000,000,

Sasbania for vegetable (can be sold) cintribute Rp 248,4 million per year The calculation is as follows: farmer buy sasbania for vegetable (Rp/day/family) 500, total family for Labuan Pandan Village 2,300 households, (assume 60% Villager) costumers sasbania is 1,380 households, spend per day (Rp) 690,000, spend per month (Rp) 20,700,000, spend per year (Rp) 248,400,000, In total, this project at list can contribute about Rp 4 Trillion per year for local villagers. This figure excludes the fruit that local people can harvest after say 4-5 years. This is just financial benefits not include economy and acology benefits which is almost uncountable.

## **The involvement of local people**

In initial stage there is a mall dispute between local people and plantation entity. Local people do not agree to import laborer from villages out of Labuan Pandan Village. Involving local people in running CDM comprises a dilemma.

- In one hand, it has been made an offer to local people to utilize the CDM site to grow crop, but they are reluctant to accept the offer, because the land/soil is too heavy (Vertisol/ clay land) can not be used to grow crops.
- On the other hand, they do not agree if the land is to be tillage by people out of the Labuan Pandan Village. They worry if (in the future) the new comer will claim the land as theirs. The local people prefer to leave the land empty rather than using by other villagers.
- To moderate this conflict, the project does not involve people out of the village but involve the local villagers as daily hire laborers with the rate of Rp 20.000/day, 11 laborers per lot, 4 lots of 10 ha. The total of laborers involved for time being is 44 laborers including four field coordinators for each lot.

## **Fuel wood**

People of those villages are popular of their habit in destroying forest. They collect fuel wood from forest by cutting the trees illegally for their income. Almost all family in the village has stock of fuel wood to be sold. They cut, and

chop the wood in due common size and tie it in about 30 cm in diameters. Each tie can contain 15-20 cuts wood with the length about 40-45 cm. A tie of wood is enough for two days cooking for common family that is cooking food just for family not for selling. They sold about Rp 3.000, - per tie in their place, the buyers come with truck and carry the wood to market in the cities.

The demand of fuel wood is predicted to increase more than double within this year as a direct impact of the increase of oil (kerosene) price. Beside expensive, the availability of kerosene is unstable, compete with the tobacco farmers who buy the kerosene in big amount to dry (oven) their tobacco leaves, and left the oil empty for other people.

There are 7,289 families using fuel wood for cooking (domestic purpose), far higher compare to those who use kerosene stove. Majority (86%) of family in Sambelia Sub District rely on wood for cooking.

All 25 farmer respondents use fuelwood for cooking. Only one respondent uses carosine stove in addition to fuelwood. The rate use of fuelwood of the respondents ranges between 2.54 to 15.26 with the average of 7.68 m<sup>3</sup>/month. This figure is bigger than that in Sakaroh which is 1,87 m<sup>3</sup> per month per family on average, or 22,44 m<sup>3</sup> per year with ranges from 2,2 to 1 m<sup>3</sup> per month (Usman, 2003). It depend on number of dishes (menus) they cook which is 40% of people cook just one menu. Beside rice which serves three times per day in common, (few two times per day) they also cook 1) vegetable, 2) fish, 3) drink water, 4) cake, 5) coffee/tea. Beside for domestic purpose, wood is also used for industries: lime stone, red brick, and clay tile including for restaurant especially in the form of charcoal for satay.

### **Opinions to the CDM project**

CDM is not so familiar to people in Lombok. Not many people now the project. No farmer knows the meaning of CDM. Farmers perceive the project just the same as common reboisation project. Planting trees, maintaining them until the trees grown up and their canopies cover the land are the activities they known in this project, not different to reboisation project. Most of university people do not know CDM. They express their opinion after interviewer explained the CDM in advance. In principle, they support the CDM project. A Mataram university staff assesses that it needs a high commitment to maintain this earth from destroys. There is a polemic in economic development: resource economic vs environmental economic. Economic development focuses its study on extracting the resources optimally without enough concern to environmental impact. This is common in the capitalist line of thinking, profit maximization. On the other hand, the negative impact of the practices left the deep shore to the people. Global warming, drier climate, flood, erosion etc have reached the serious and intolerable condition. These worries push people to think about recovering the environment. Where the money comes to cost the environmental development? CDM is a clean development mechanism which take into account the environment in due portion. Countries that do not have forest should pay compensation to the countries with their forest. This is to pursue

the green countries not to shrink their forest area, even; they are encouraged to enlarge their forest to balance the CO<sub>2</sub> emission in the air with the ability of leaves to absorb the CO<sub>2</sub>. Refers to Kyoto protocol concept, CDM seems very complicated concept. It is suspect able that the difficulties are being on purpose as some developed countries seem still reluctant to pay compensation.

### **Problems, troubles or difficulties**

Based on in depth discussion with local government and its staffs, it can be summarized that the main trouble in future plan for forest in that location are **water, fire, poor clay soil and price** of agricultural products. All respondent are eagerly hope government and other stakeholders to get involve in tackling the problems. These three problems causing people frequently fail in running reboisation and reforestation. Prior to this current CDM project, that site has been afforded to plant forest trees. Incorrect time of planting (too late) causes the trees die of drought. Although the trees get a life in the rainy season, but because the water limitation, and fire particularly in dry season, cause the life trees distinguished.

In the long run issue, once the trees have grown up, the common potential problem is illegal logging. This practice reaches the peak at the time of reformation. People feel free to cut trees under reason that the unfairness system stipulated by government does not help the poor people in tackling their life problems. Cutting trees is the anger expression of people. Some people confronted this reason. This group of people tends to see that people used and cut the tree for their income. The closeness of job opportunity in industrial and trading sectors direct the people to use forest as their source of income. Based on respondents, the main problem their face in income generating (livelihood) is (a) difficulties in finding job opportunity (b) low wage. The hardness in finding job causing people get involve in bribe practices, especially in getting government employee both as civil servant and as military staffs. Not many people are able to bribe and win the competition in getting the job. Those who fail in the competition, leave their fate to the time. No alternative, rather than zero, they forcefully accept the low pay job or step in the forest for generating income. This, in turn, will add the vandalism of the forest. Besides economic factor, deforestation in Lombok are also triggered by social and political factors. Yakin (2005) also reported that the weakness in law enforcement, social envy, misslead of NGO function contribute to practices of deforestation in Rinjani Maountain Area. In some cases, local government officers are supposed to shield and maintain the forest, but in field it is found that they are also involved in taking part in illegal logging activities.

## **Conclusion**

Cleaning Development Mechanism (CDM) is a sustainable development program funded internationally, is being tried in Lombok, and is considered as a new approach for the people. The presence of CDM project does not loose respondents, they get chance to hire their labor. The CDM approach promises many benefits: ecology, economy and financial. The presence of CDM is less well known by local people and therefore it needs to be socialized more intensively to enhance the support and stake holders participation. The role of funding countries plays the key determinant factor for the approach.

## **Policy implication**

This is a golden chance for government to redevelop forest. It is need integrative approach to implement this win - win collaboration. People are the first in introducing it.

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